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846

**PROJECT** 

VICINITY MAP

1772**AREA** 

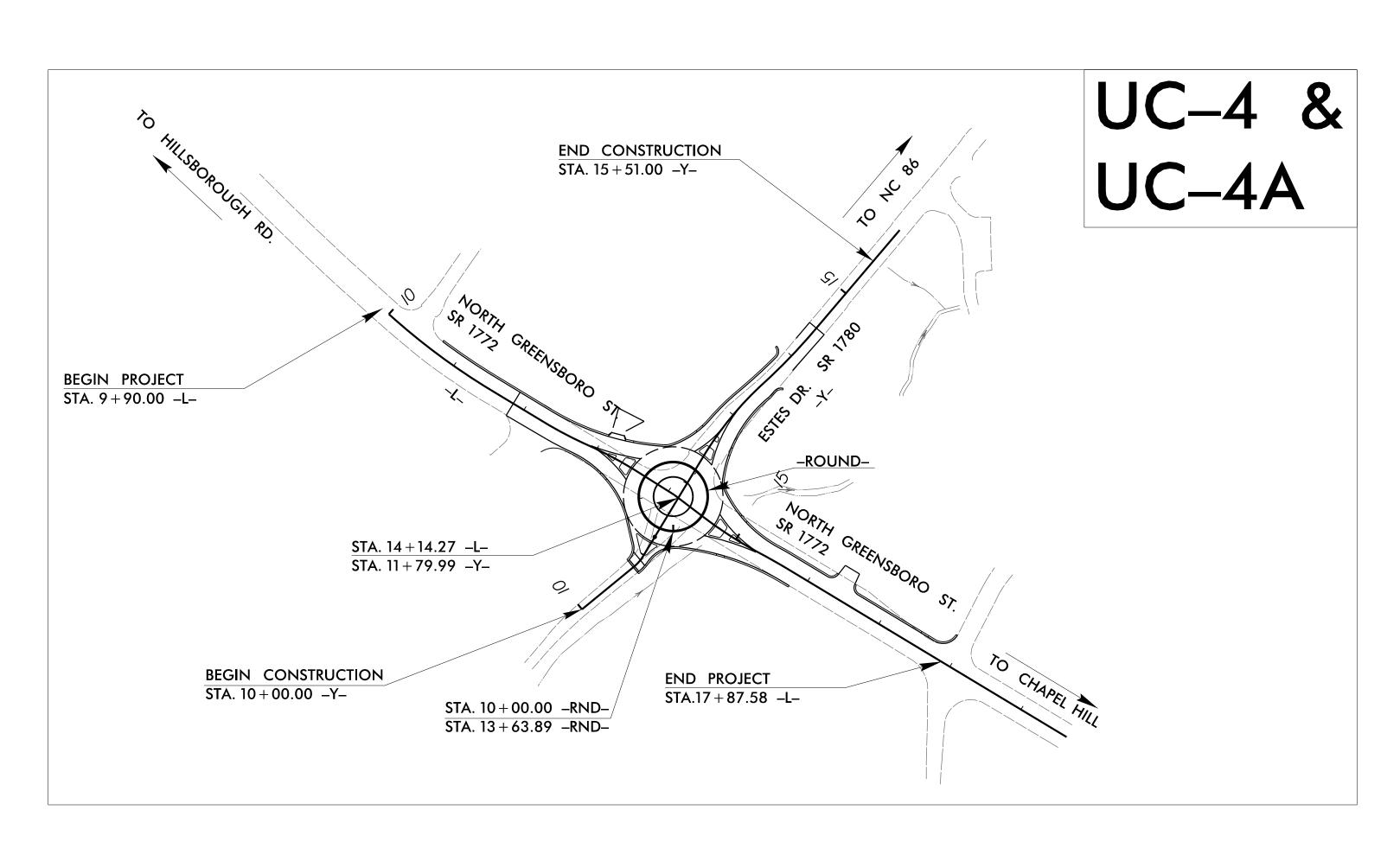
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

T.I.P. NO. SHEET NO U-5846 UC-1

# UTILITY CONSTRUCTION PLANS ORANGE COUNTY

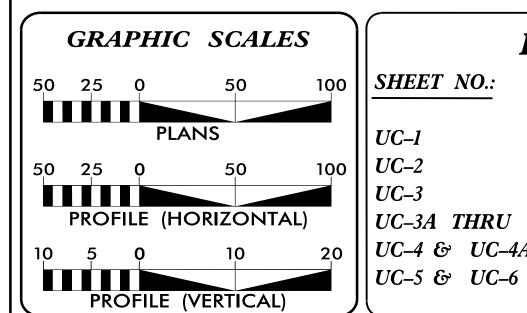
LOCATION: SR 1772 (GREENSBORO STREET) AT SR 1780 (ESTES DRIVE) IN CARRBORO. CONSTRUCT ROUNDABOUT.

TYPE OF WORK: WATER AND SANITARY SEWER RELOCATION





DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED



#### INDEX OF SHEETS

SHEET NO.: **DESCRIPTION:** 

TITLE SHEET *UC-2* UTILITY SYMBOLOGY **NOTES** 

UC-3A THRU UC-3F DETAILS | | UC-4 & UC-4A UTILITY CONSTRUCTION PLAN SHEET UTILITY CONSTRUCTION PROFILE SHEET

(A) WATER – ORANGE WATER AND SEWER AUTHORITY(OWASA) (B) SANITARY SEWER – ORANGE WATER AND SEWER AUTHORITY(OWASA)

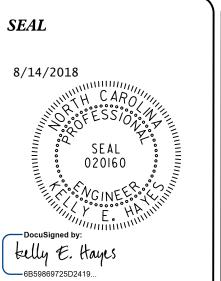
OWNERS ON PROJECT

WATER AND SEWER

PREPARED IN THE OFFICE OF **ENGINEERING &** Fax:919-789-9591

1025 Wade Avenue Raleigh, NC 27605 CONSTRUCTION License: C-2197

Kelly Hayes, PE, PLS CONSULTANT CONTACT #1 Justin Beard, PE CONSULTANT CONTACT #2





**DIVISION OF HIGHWAYS** UTILITIES UNIT 1555 MAIL SERVICES CENTER RALEIGH NC 27699–1555 PHONE (919) 707–6690 FAX (919) 250-4151

Donna Jackson, PE Tucker Martin, PE

UTILITIES REGIONAL ENGINEER UTILITIES ENGINEER

UTILITIES COORDINATOR

Tanga Sampson

## UTILITIES PLAN SHEET SYMBOLS

#### PROPOSED WATER SYMBOLS

## Water Line (Sized as Shown) — 22½ Degree Bend ——— 45 Degree Bend ——— 90 Degree Bend ——— Gate Valve— Butterfly Valve — Tapping Valve — Line Stop — Line Stop with Bypass— Blow Off----Fire Hydrant ———— Remove Fire Hydrant———— Water Meter ———— Relocate Water Meter ———— Remove Water Meter ———— Water Pump Station ———— PS(W) RPZ Backflow Preventer ———— DCV Backflow Preventer ———— Relocate RPZ Backflow Preventer——— Relocate DCV Backflow Preventer————

#### PROPOSED SEWER SYMBOLS

Gravity Sewer Line(Sized as Shown) Force Main Sewer Line	112" SS
(Sized as Shown)	12 733
Manhole (Sized per Note)	•
Sewer Pump Station —————	PS(SS)

#### PROPOSED MISCELLANOUS UTILITIES SYMBOLS

Joint Use Pole ————————————————————————————————————	st Blo
	Releas
Telephone Pedestal ————————————————————————————————————	ty Va
Totophone redestat 00hor	ete F
Utility Line by OthersSteel	. Pier
Trenchless Installation ————————————————————————————————————	Note
Encasement by Open Cut ———————————————————————————————————	item N
Encasement ————————————————————————————————————	

Thrust Block —	·
Air Release Valve	AR - ●
Utility Vault————————————————————————————————————	- UV
Concrete Pier————————————————————————————————————	- CP
Steel Pier ————————————————————————————————————	- SP
Plan Note —	NOTE
Pay Item Note ————————————————————————————————————	PAY ITEM

#### EXISTING UTILITIES SYMBOLS

Power Pole—————	•
Telephone Pole—————	-
Joint Use Pole————	<b>-</b>
Utility Pole————	•
Utility Pole with Base ————	•
H-Frame Pole—————	•—•
Power Transmission Line Tower———	$\boxtimes$
Water Manhole ——————	<b>®</b>
Power Manhole —	P
Telephone Manhole —————	Ф
Sanitary Sewer Manhole ————	<b>®</b>
Hand Hole for Cable ————	<b>E</b>
Power Transformer —————	M
Telephone Pedestal ————	
CATV Pedestal —————	C
Gas Valve —	<b>♦</b>
Gas Meter —	<b>♦</b>
Located Miscellaneous Utility Object ——	<b>⊙</b>
Abandoned According to Utility Records —	AATU
End of Information ————	E.O.I.

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A/G Gds
A/G Water
ss
A/G Sanitary Sewer
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\*For Existing Utilities

### **UTILITY CONSTRUCTION**

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PROJECT REFERENCE	NO.	SHEET NO.
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	Doc	Signed by: E. Hamilian
LITIES ENGINEERING SEC. ONE:(919)707-6690 X:(919)250-4151	UTTÊ	PLANS ONLY

#### UTILITY CONSTRUCTION

#### PROJECT SPECIFIC NOTES:

- 1. PROPOSED WATER LINE SHALL BE PC (PRESSURE CLASS) 350 D.I.R.J. (DUCTILE IRON RESTRAINED JOINT) PIPE, FITTINGS, VALVES AND UTILITY CONTROLS.
- 2. PROPOSED SANITARY SEWER SHALL BE PC (PRESSURE CLASS) 350 D.I. (DUCTILE IRON) PIPE AND FITTINGS WITH PIPE INTERIOR PROTECTIVE COATINGS.
- 3. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
- 4. CONCRETE THRUST BLOCKS (i.e. THRUST COLLAR & BLOCKING) SHOWN ON EXISTING OR PROPOSED UTILITY LINES ARE INCIDENTAL ITEMS, MEASUREMENT WILL NOT BE DONE AND THE ITEMS WILL BE INCIDENTAL TO OTHER CONTRACT PAY ITEMS. SEE DETAILS 512.08 (SHEETS 1 AND 2) AND DETAIL 512.09.
- 5. THE CONTRACTOR SHALL COORDINATE ISOLATION OF THE EXISTING WATER MAINS AND SANITARY SEWER MAINS FOR TIE-INS WITH UTILITY OWNER. CALL NICK PARKER AT 919-537-4201. IF TEMPORARY SHUT DOWN OF UTILITY IS REQUIRED, THE CONTRACTOR WILL COORDINATE THIS SHUT DOWN WITH UTILITY OWNERS IN A MANNER THAT IS MOST CONVENIENT FOR CUSTOMERS AND UTILITY OWNER.
- 6. INSTALL WATERLINES WITH MINIMUM 42" OF COVER TO FINISHED GRADE UNLESS DIRECTED OR APPROVED.

#### **GENERAL NOTES:**

- 1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.
- 2. THE EXISTING UTILITIES BELONG TO ORANGE WATER AND SEWER AUTHROITY (OWASA) IS A UTILITY OWNER.
- 3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION.
- ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
- 4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
- 5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

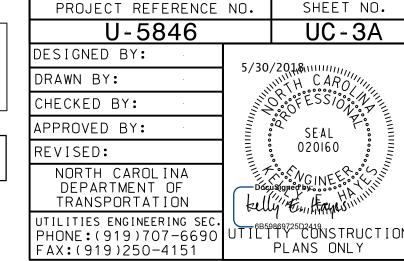
- 6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
- 7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
- 8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
- 9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, "SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

#### LIST OF STANDARD DRAWINGS:

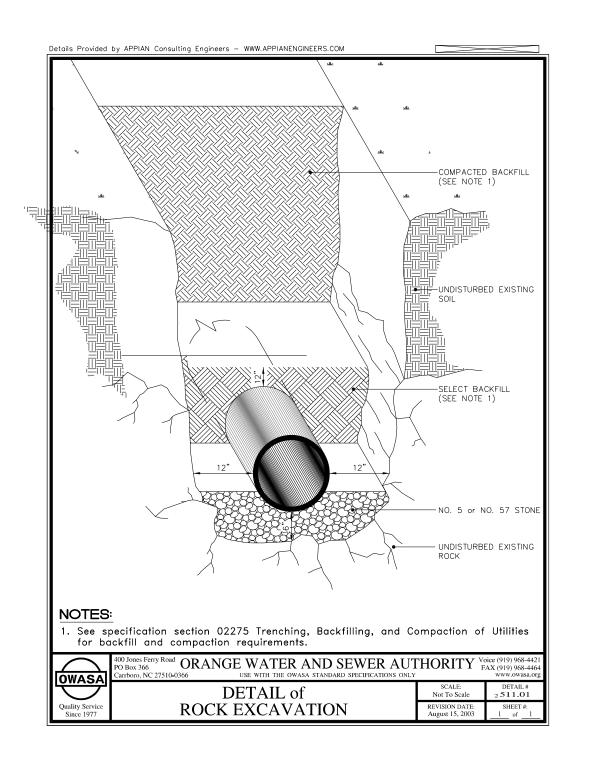
SEE OWASA STANDARD DETAILS ON SHEETS UC-3A THRU UC-3F

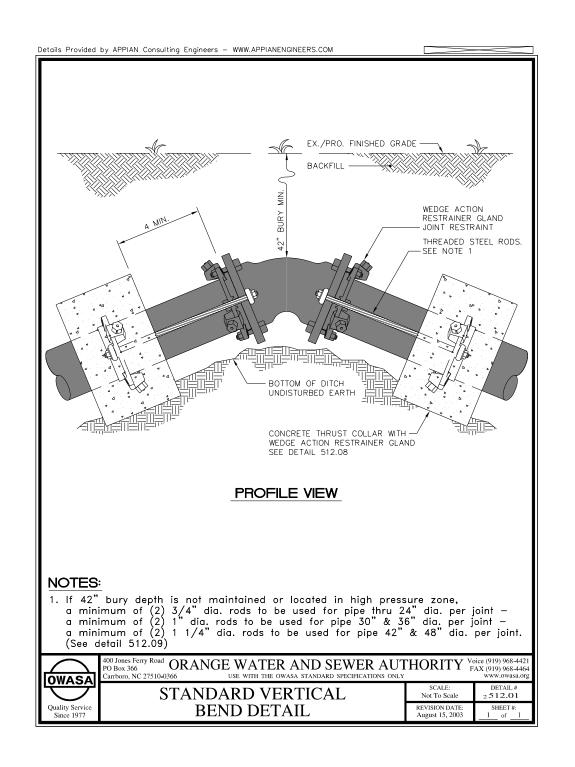
ENGINEERING & CONSTRUCTION 1025 Wade Avenue Raleigh, NC 27605 Tel:919-789-9977 Fax:919-789-9591 License: C-2197

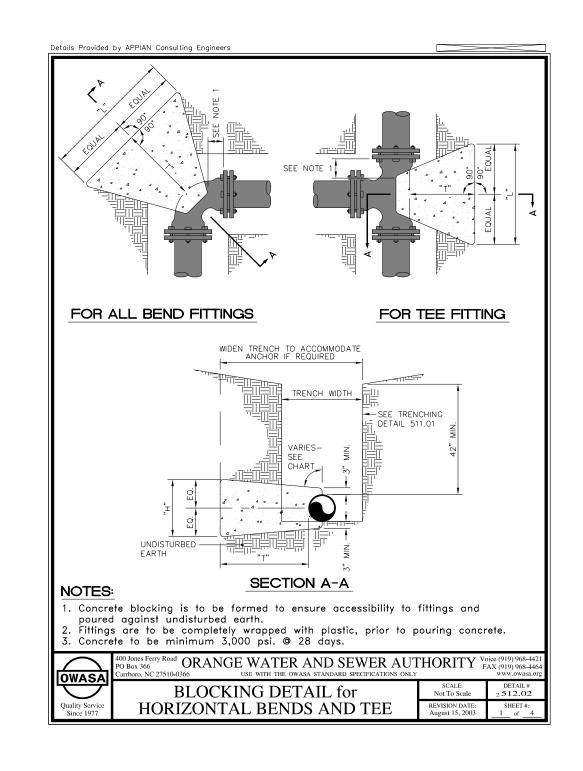
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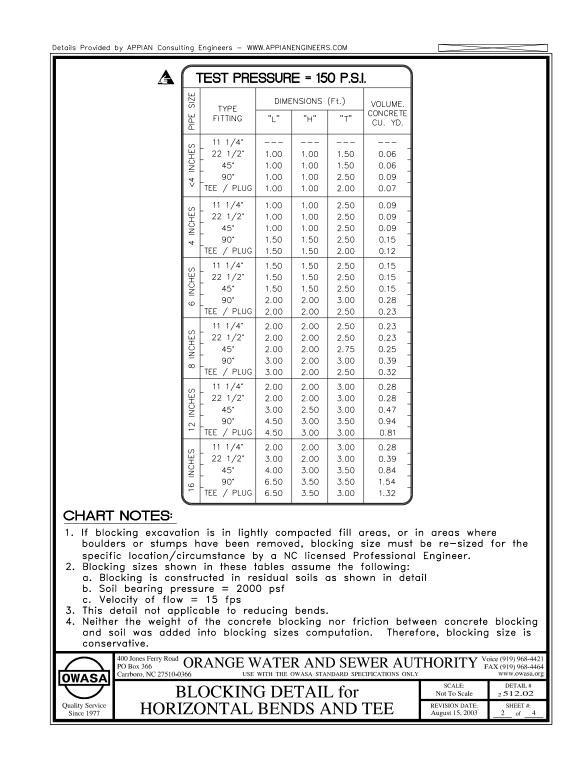


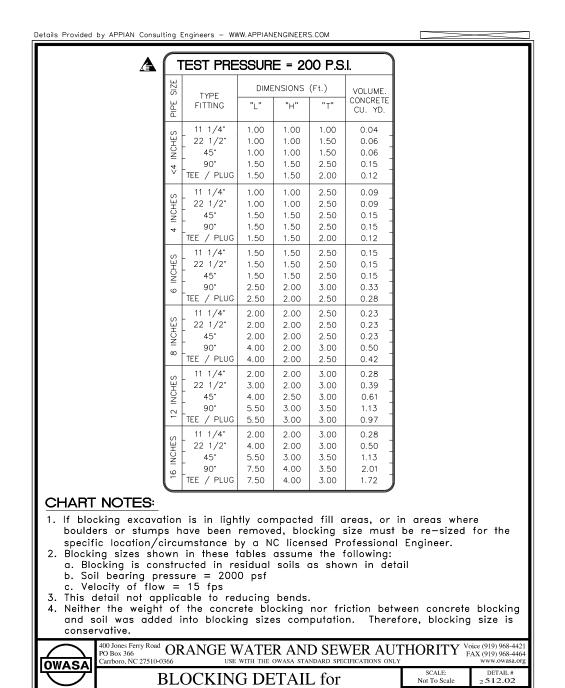
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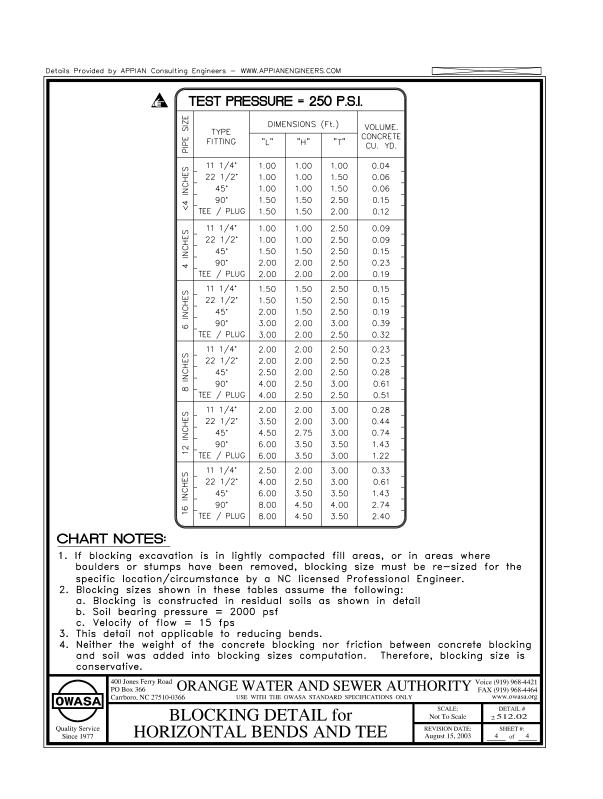


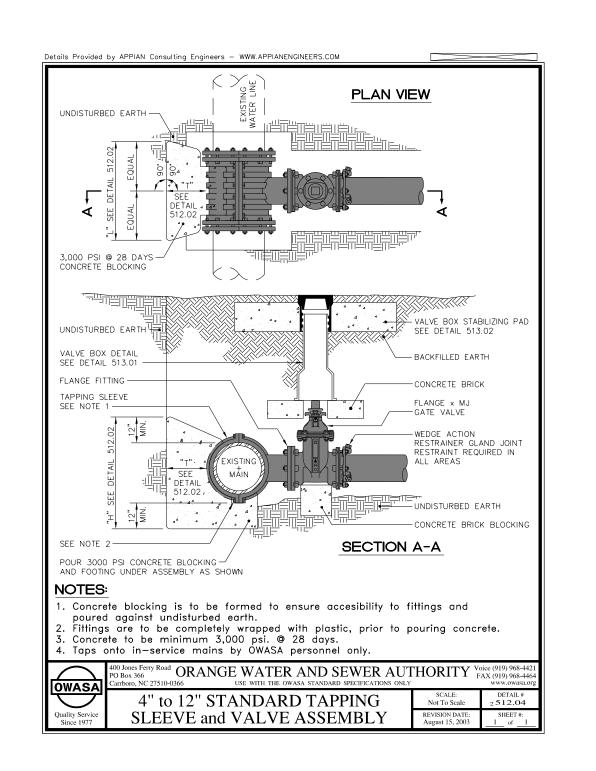


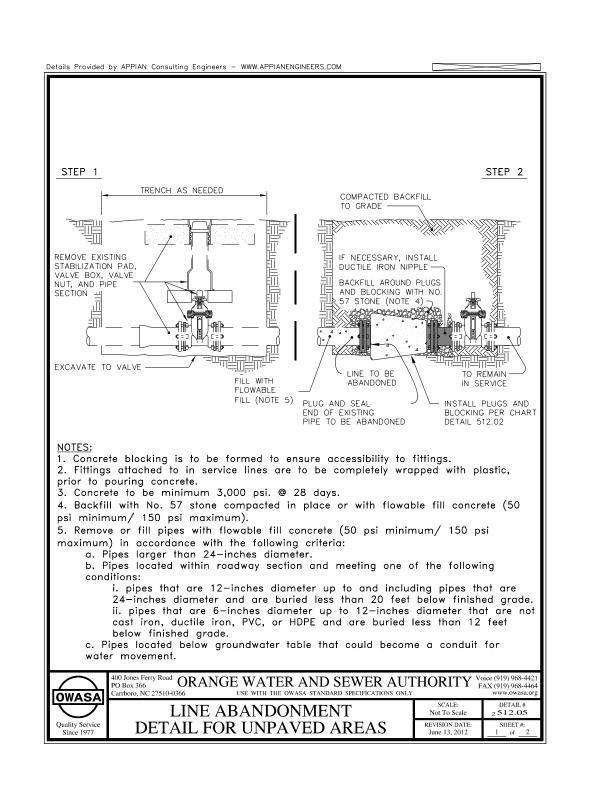




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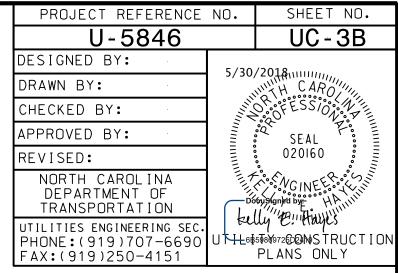




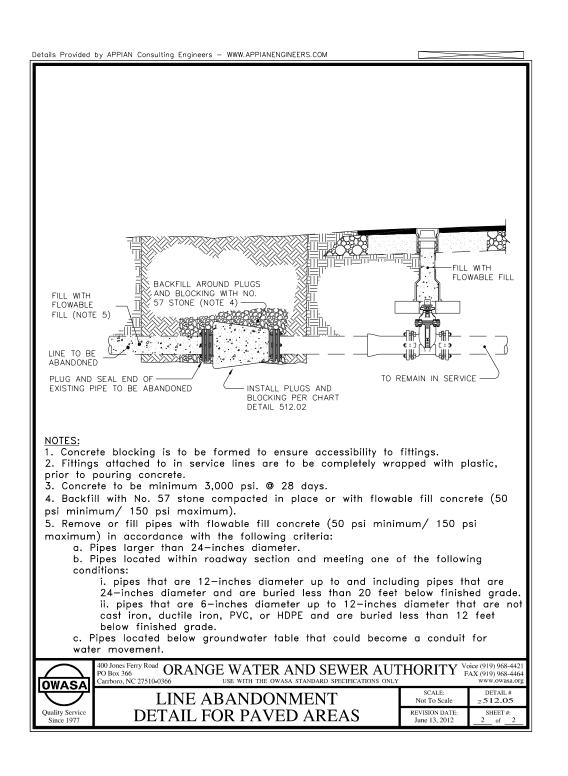
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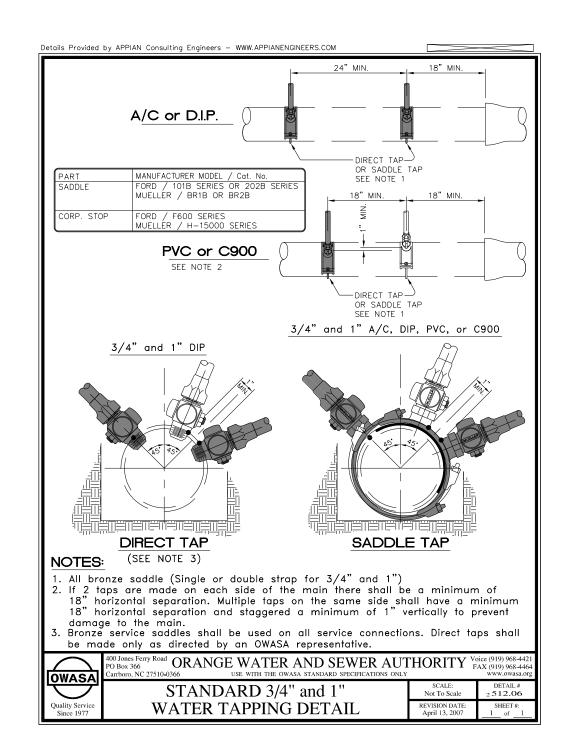
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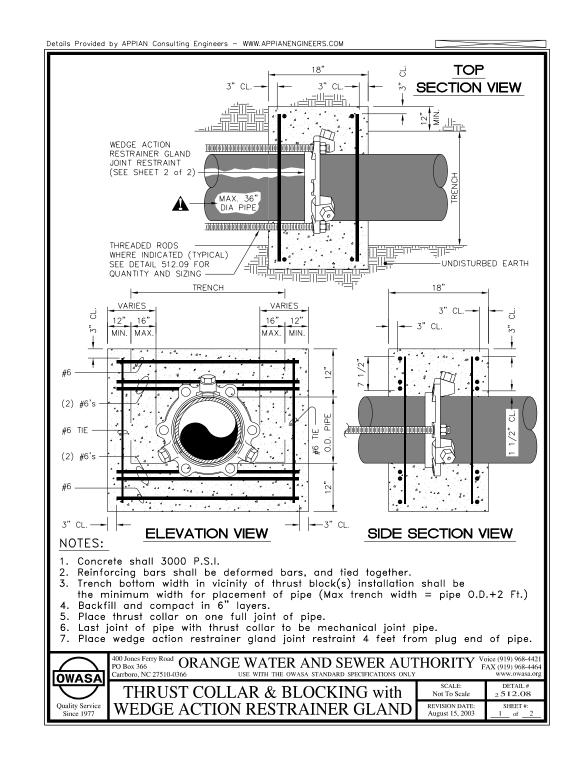
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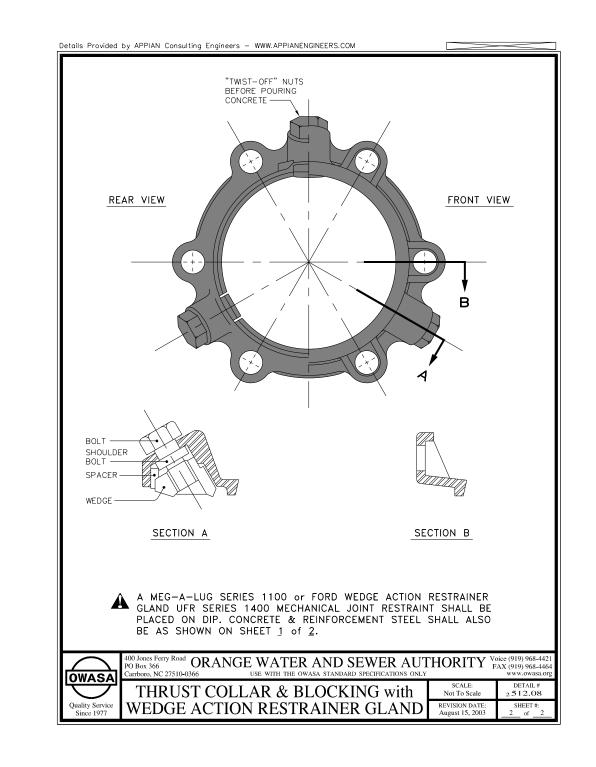


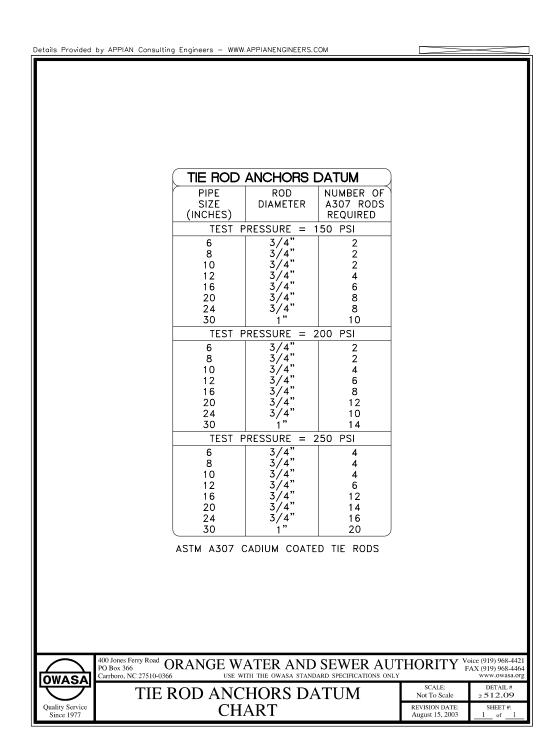
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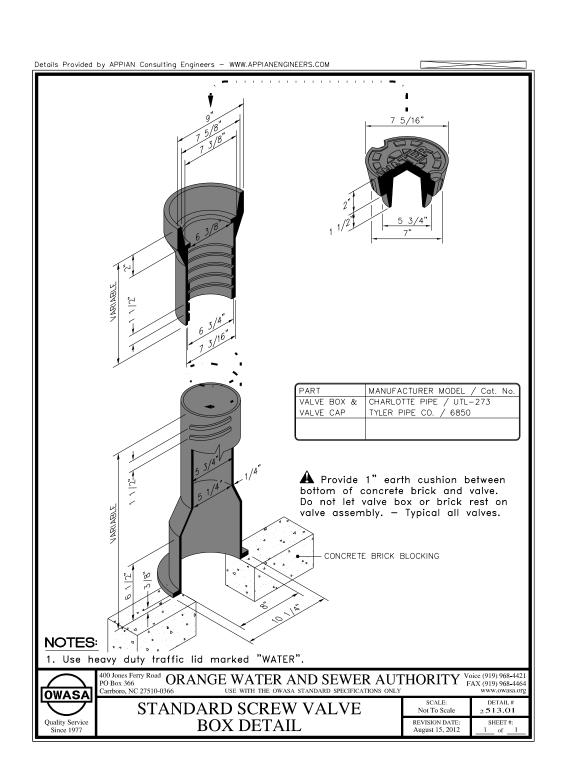


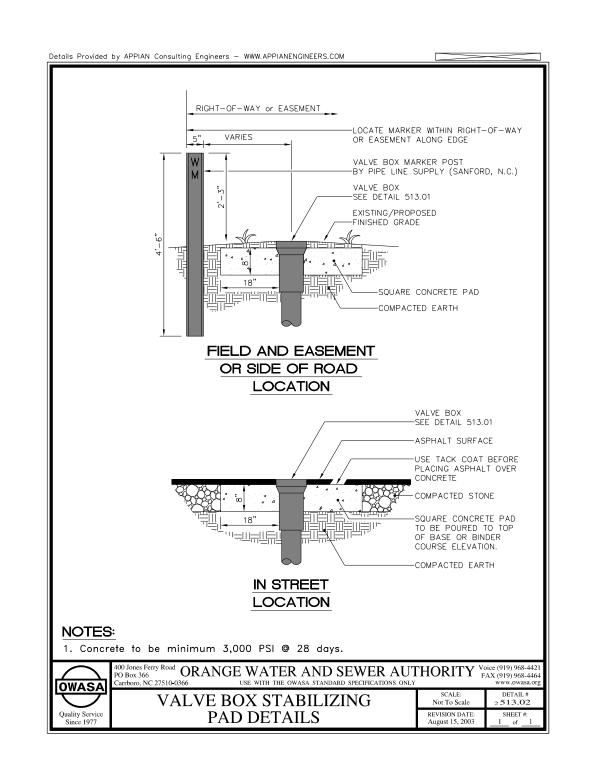


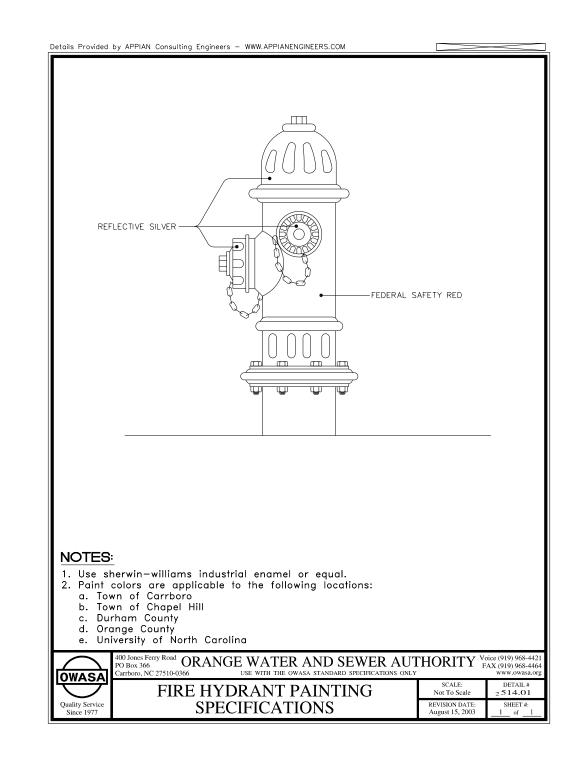










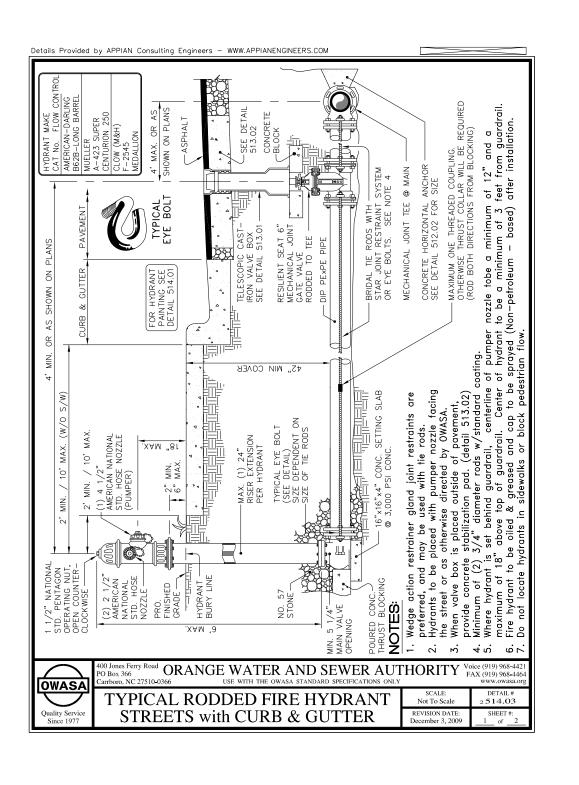


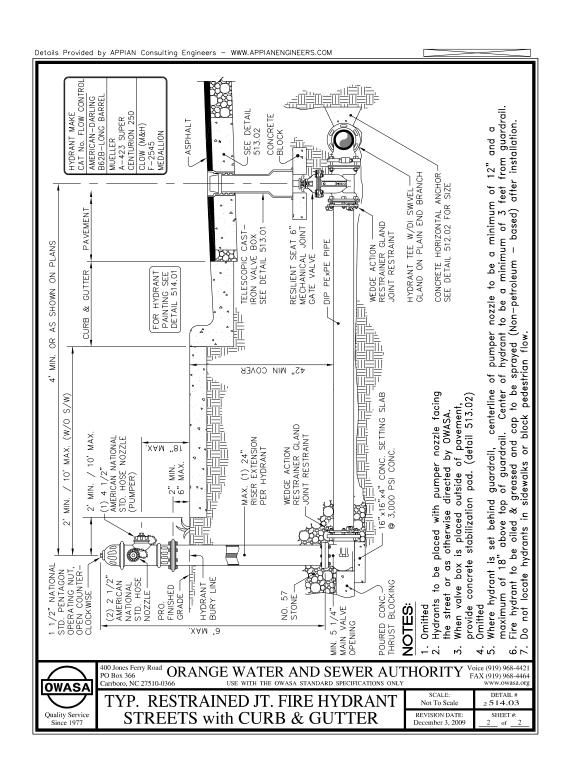


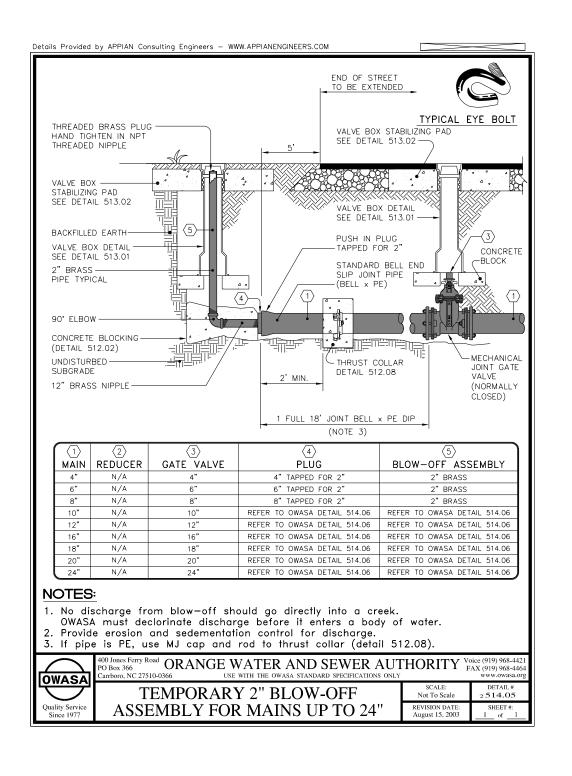
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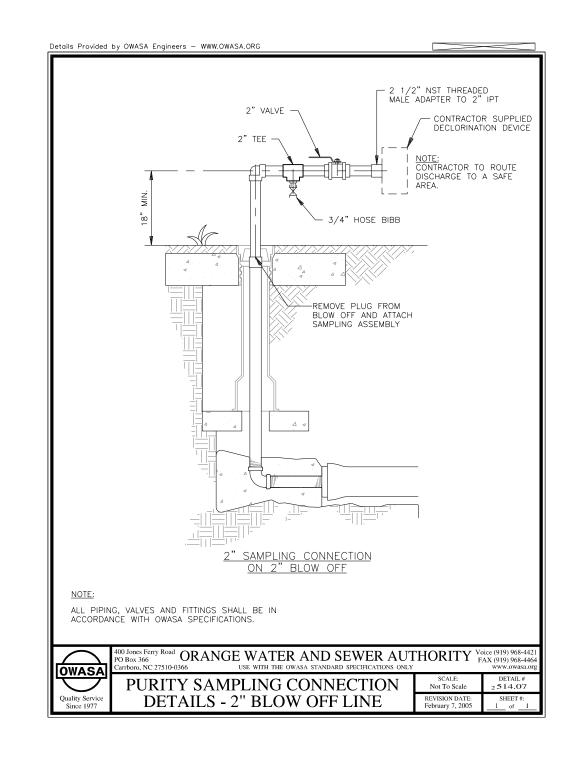
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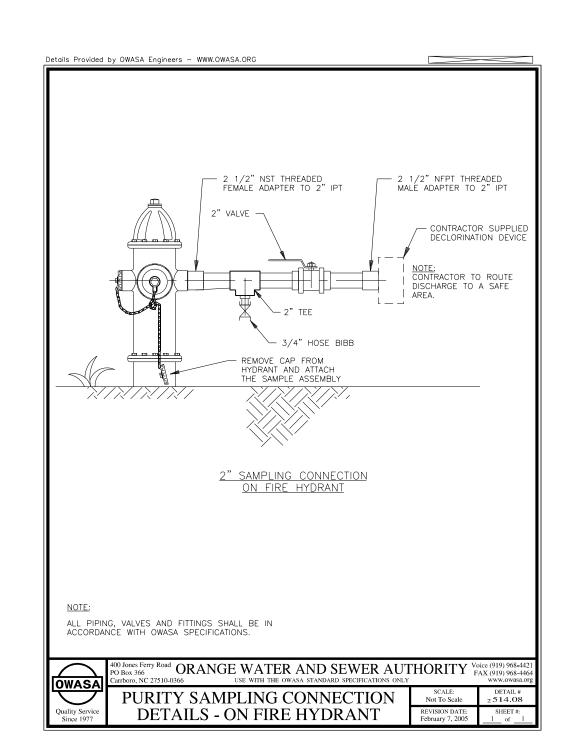
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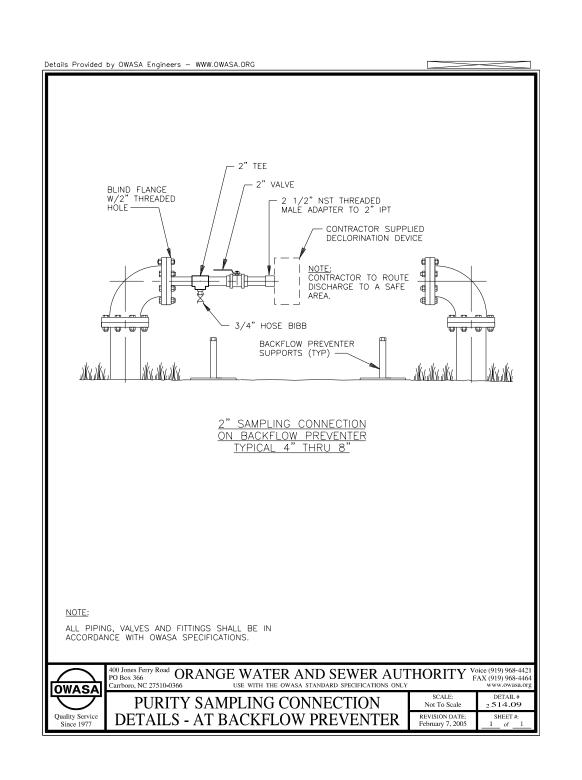


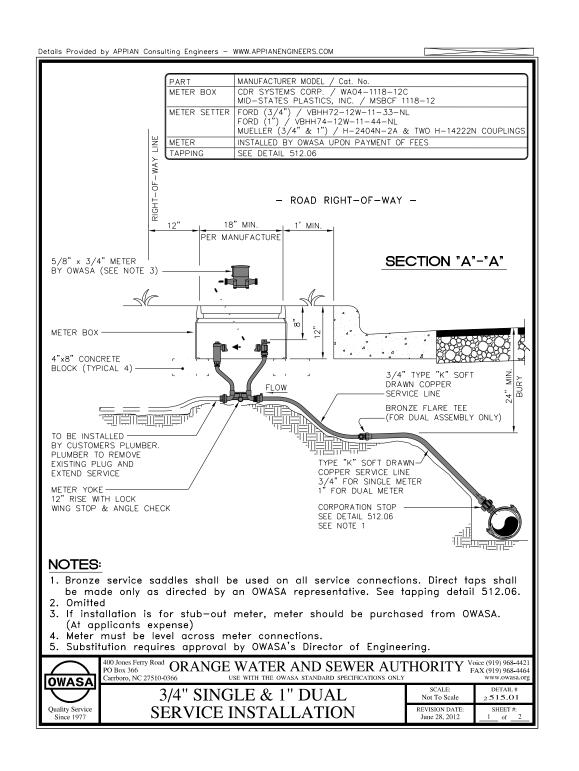


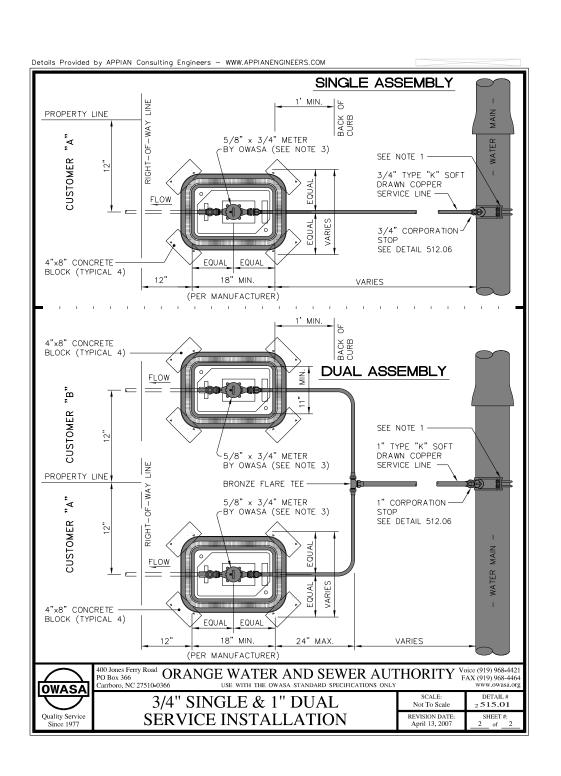








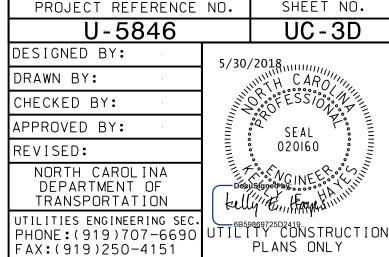




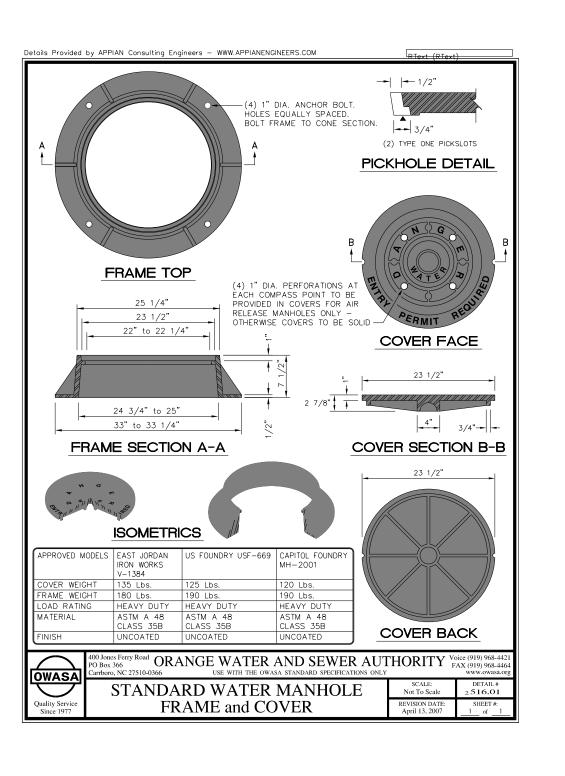
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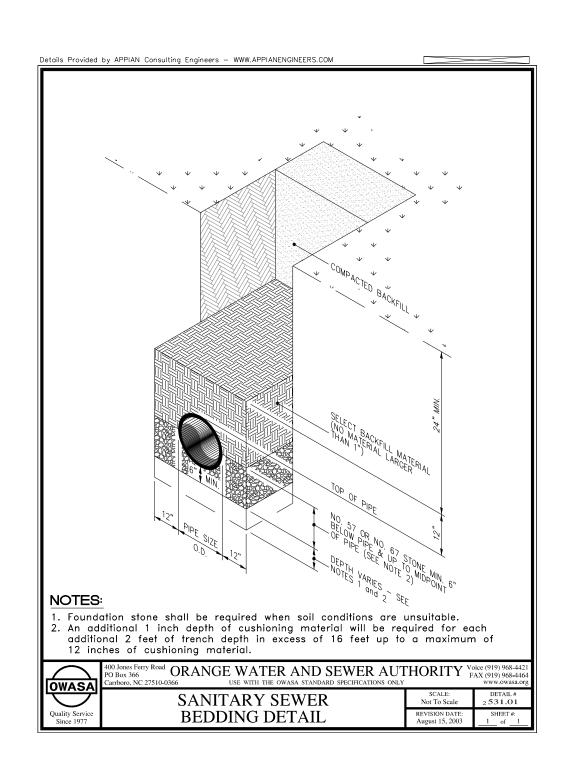


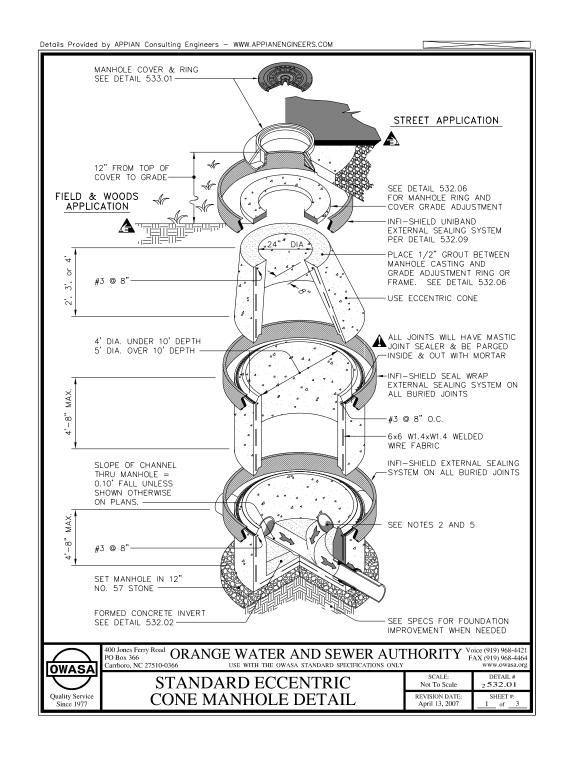
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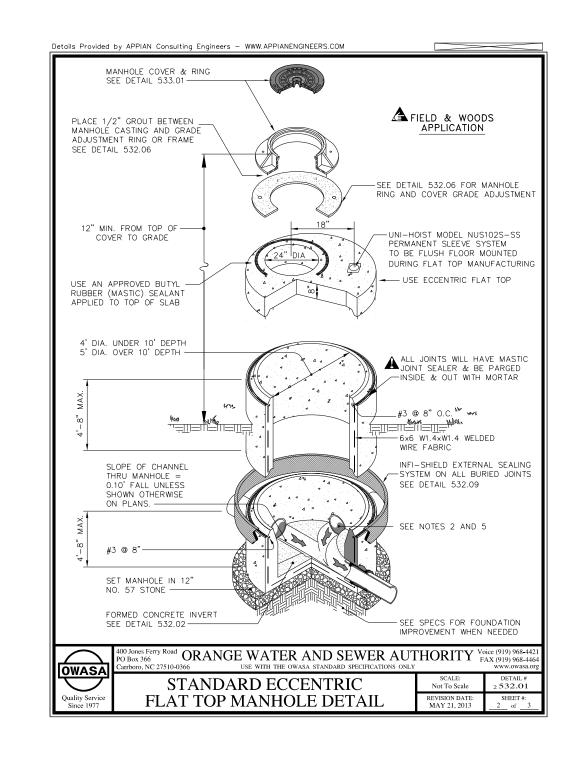


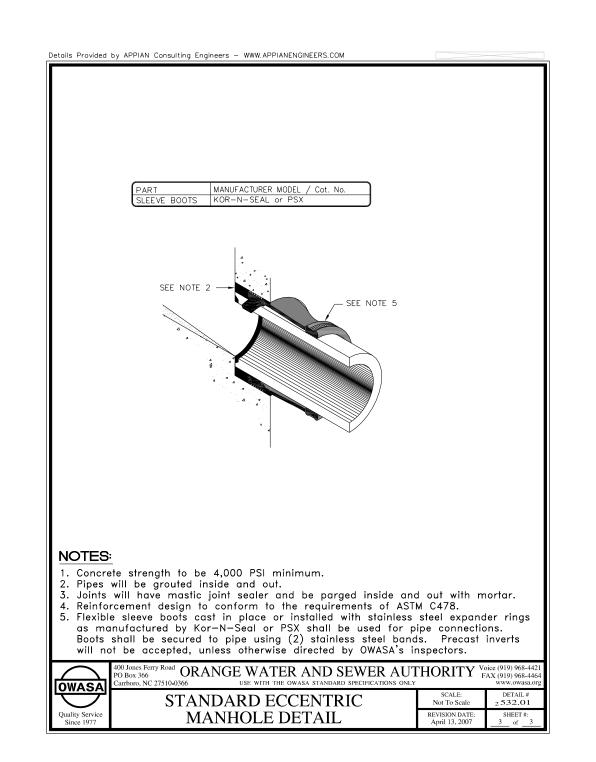
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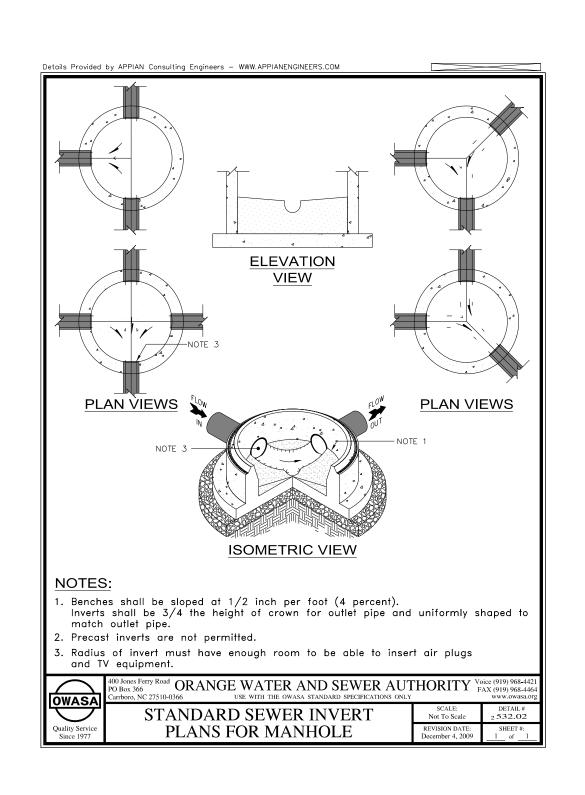


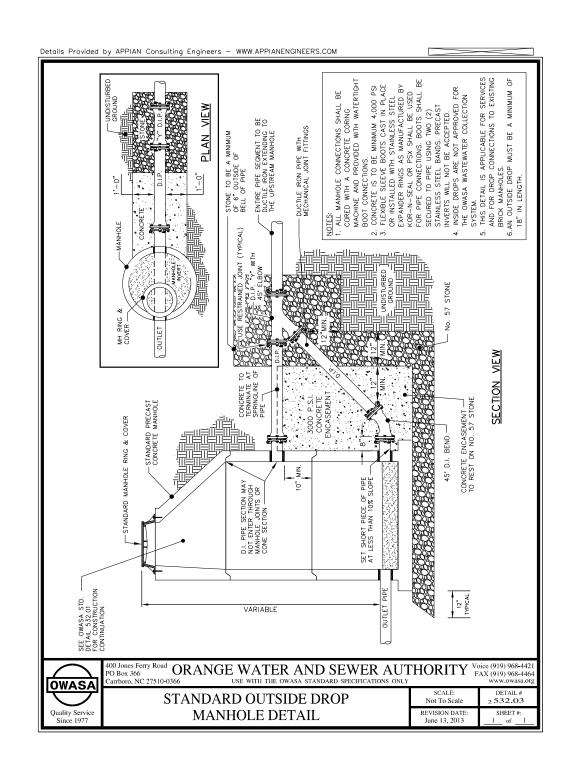


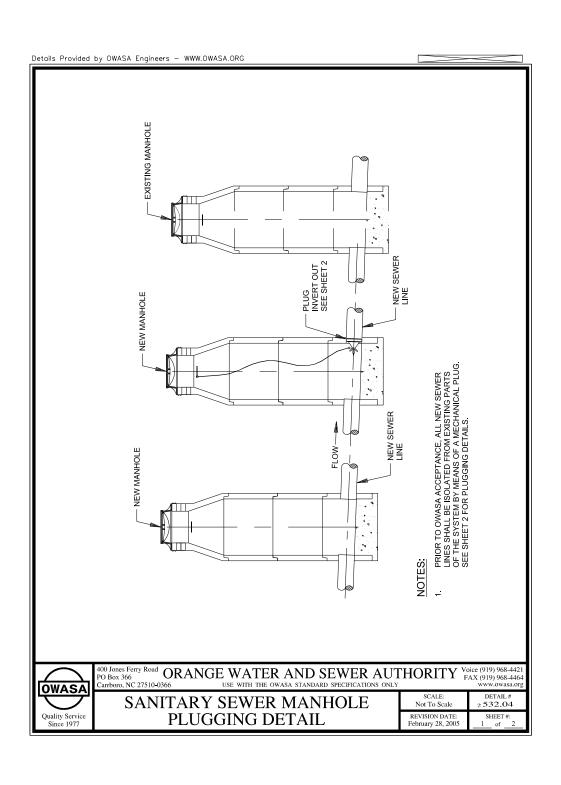












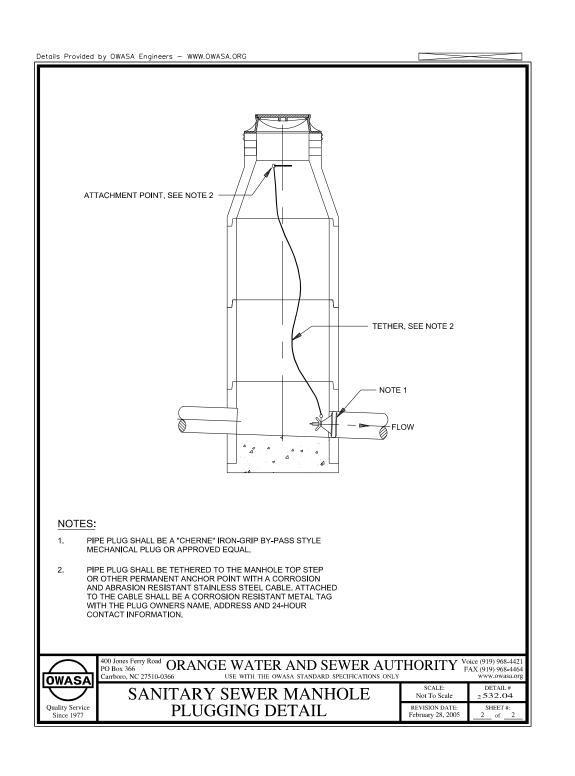
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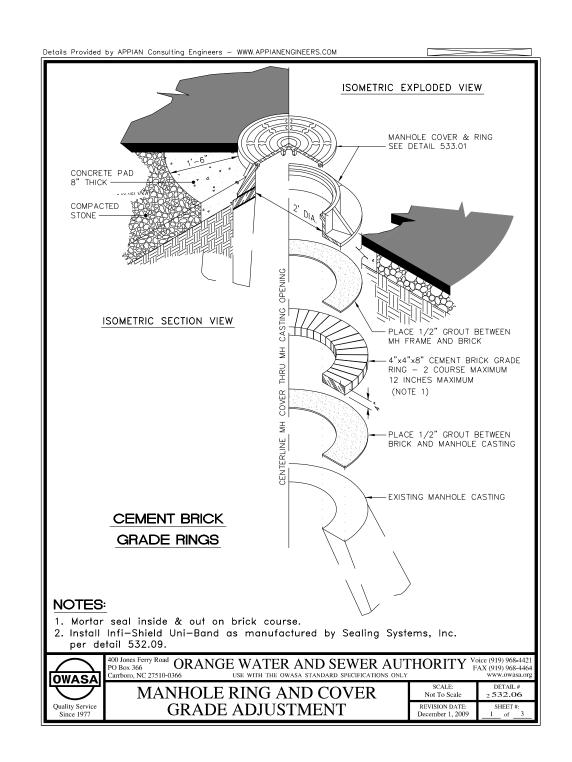


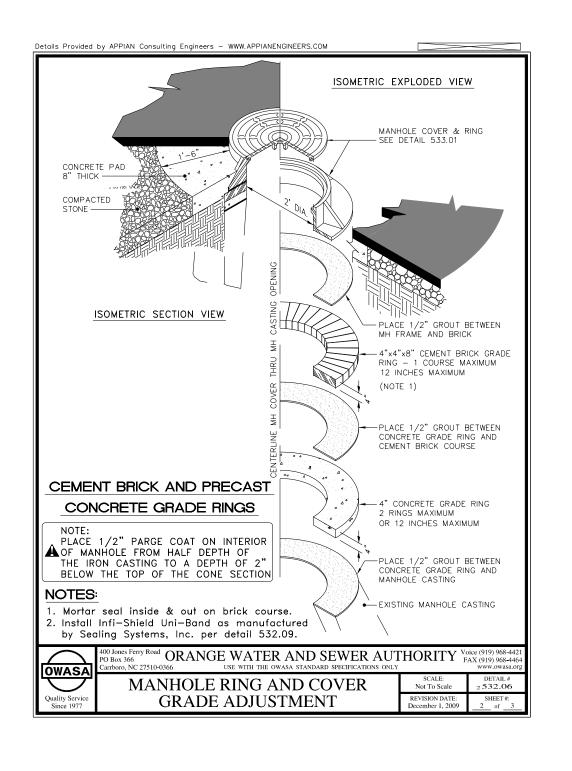
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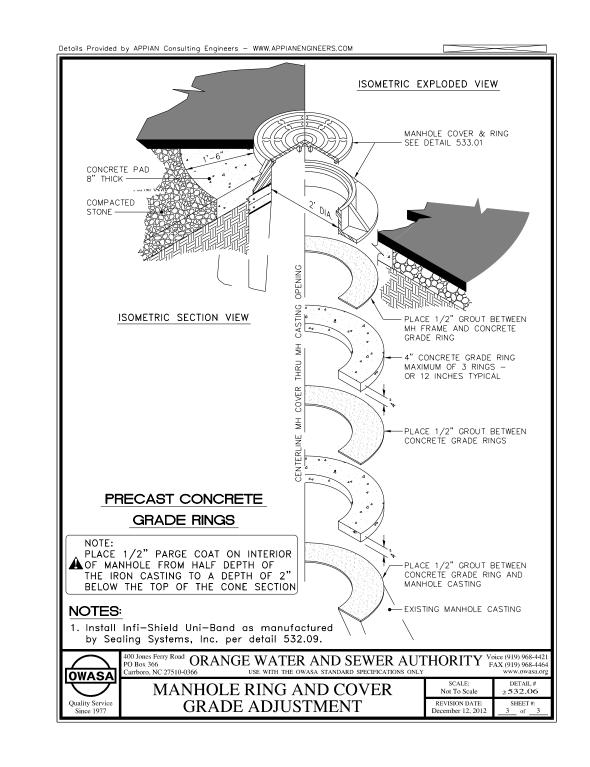
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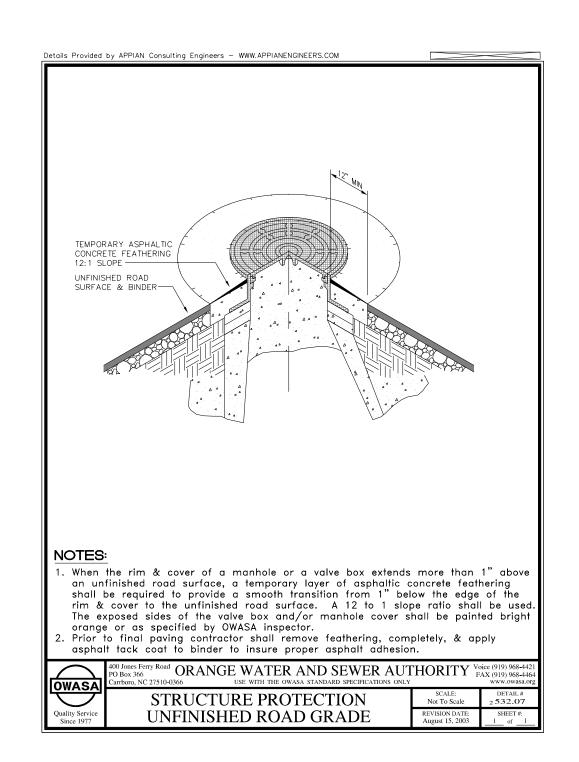
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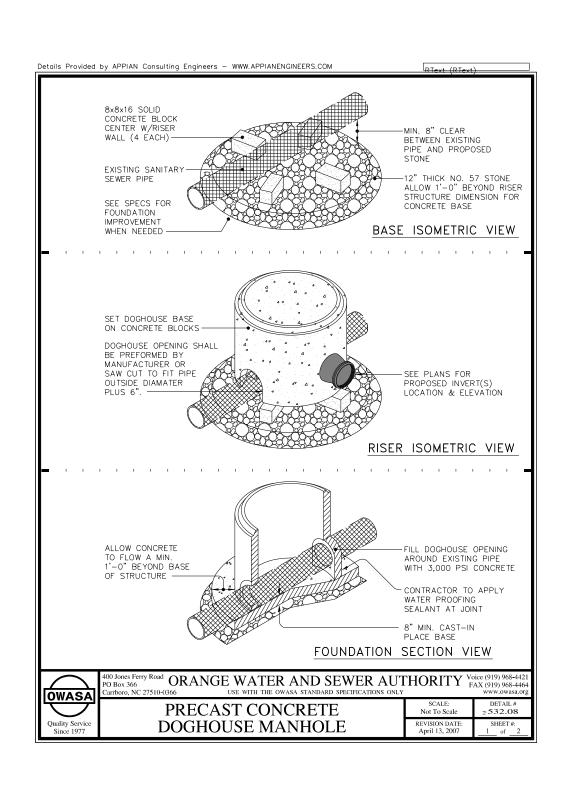


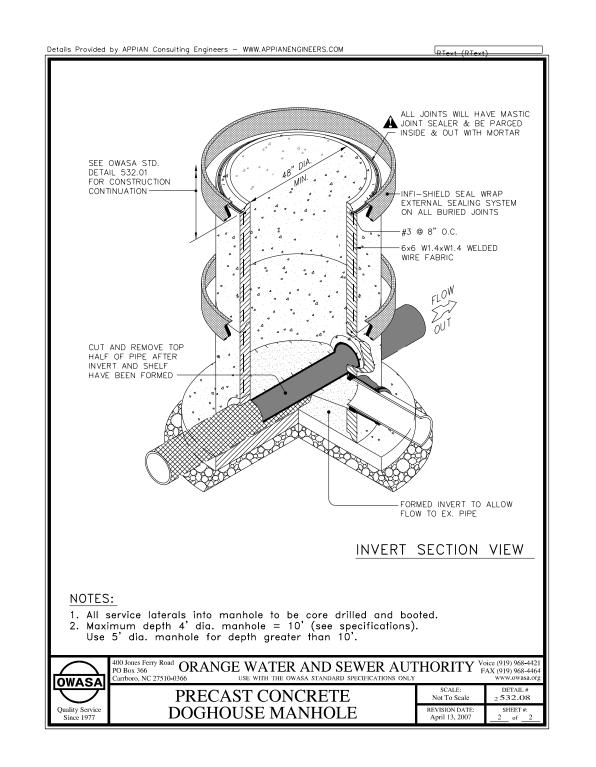


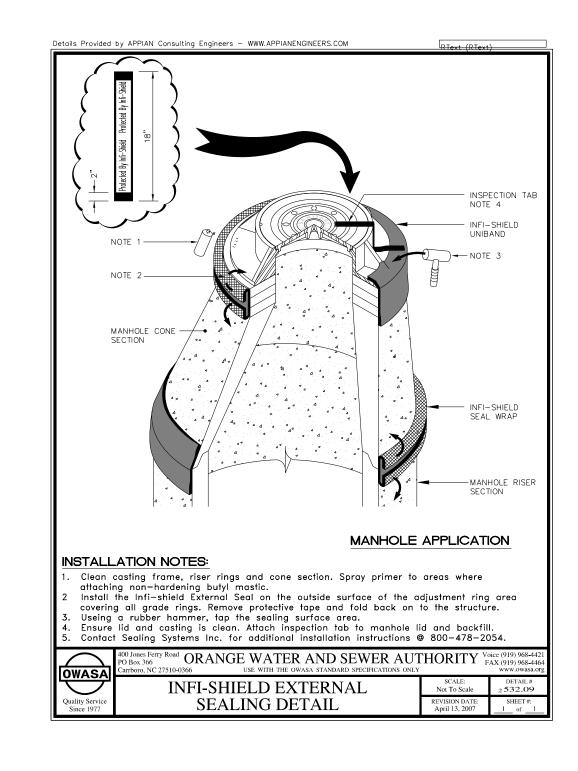








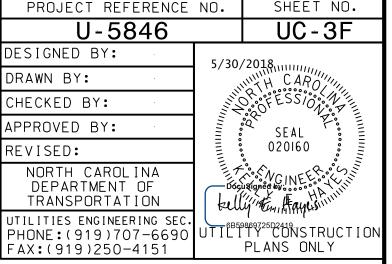




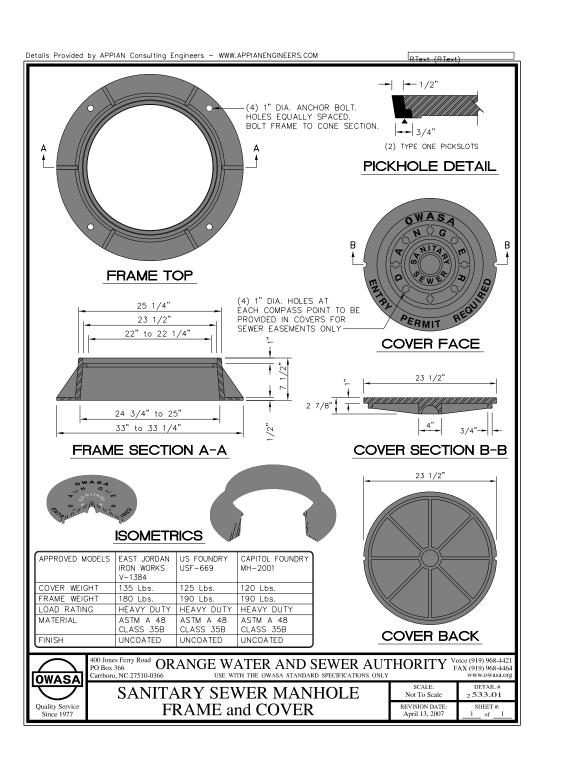
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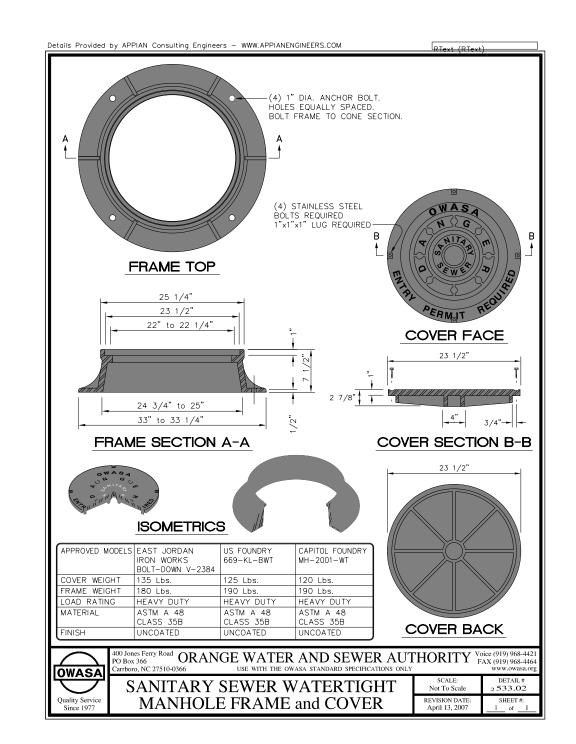


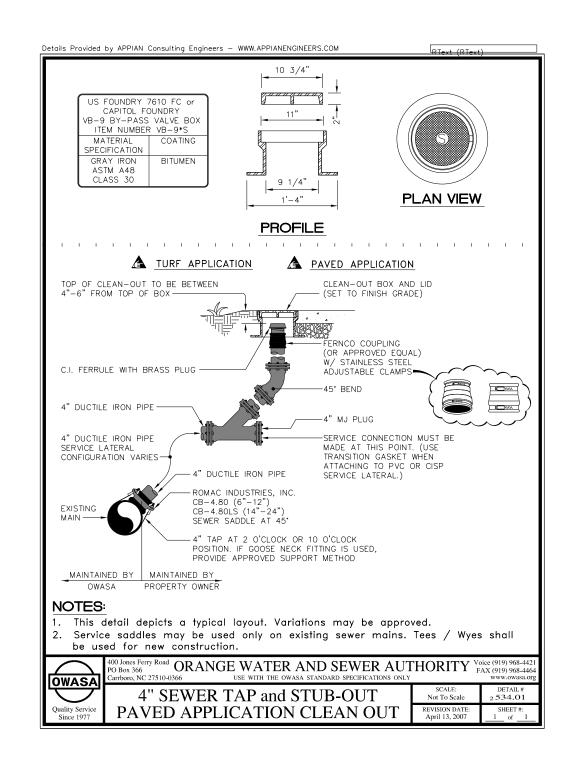
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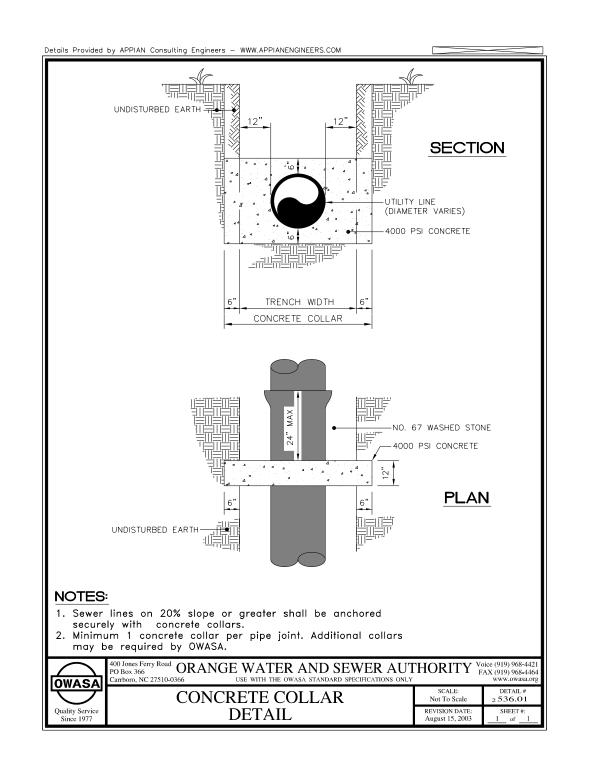


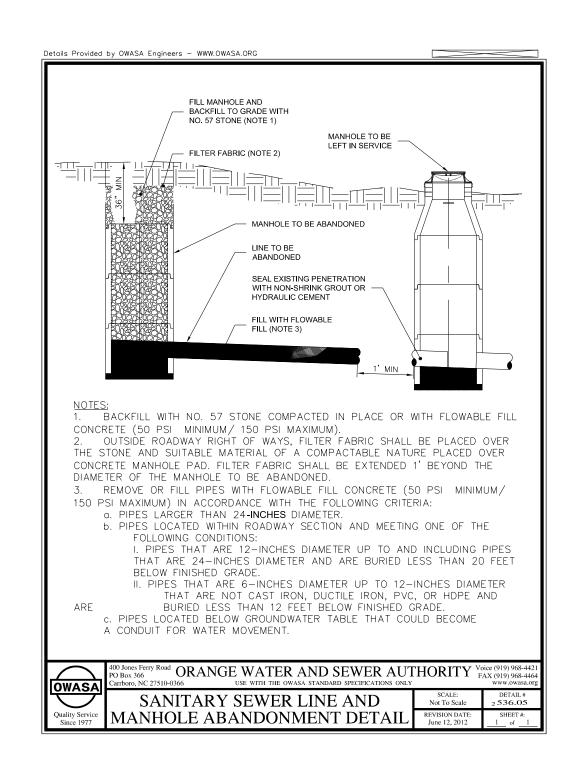
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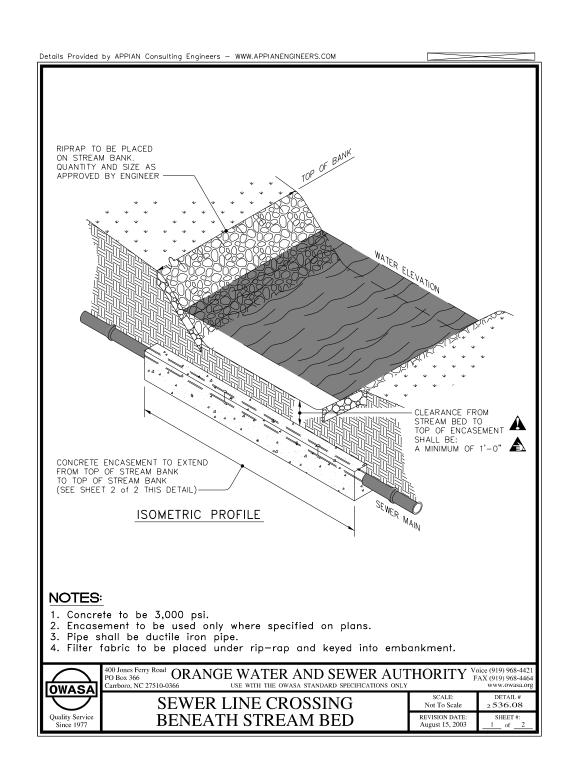


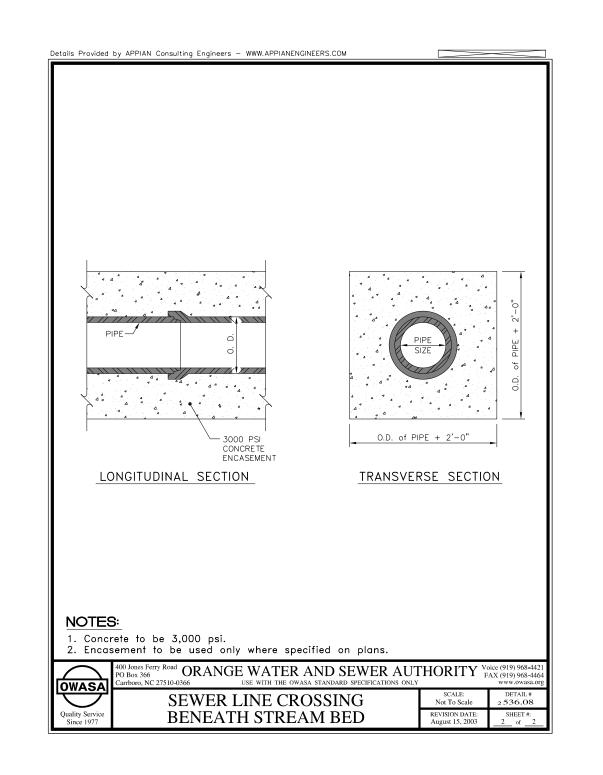








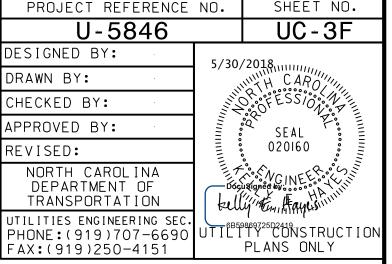




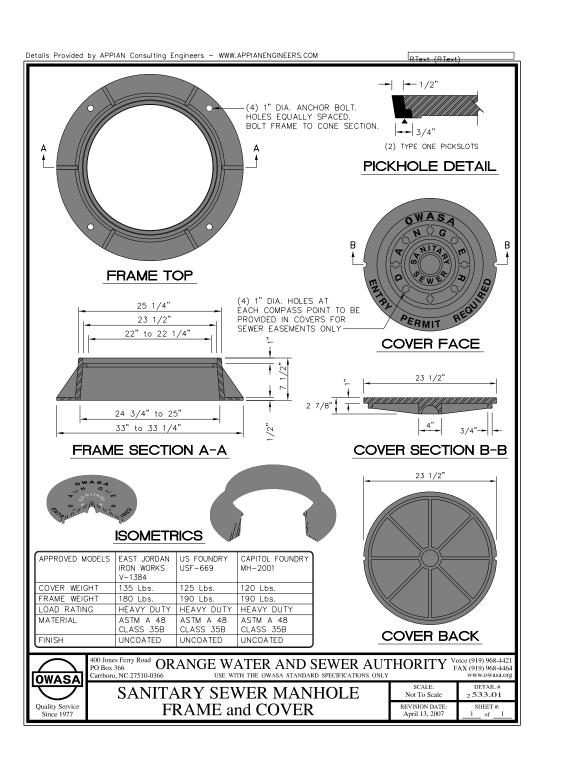
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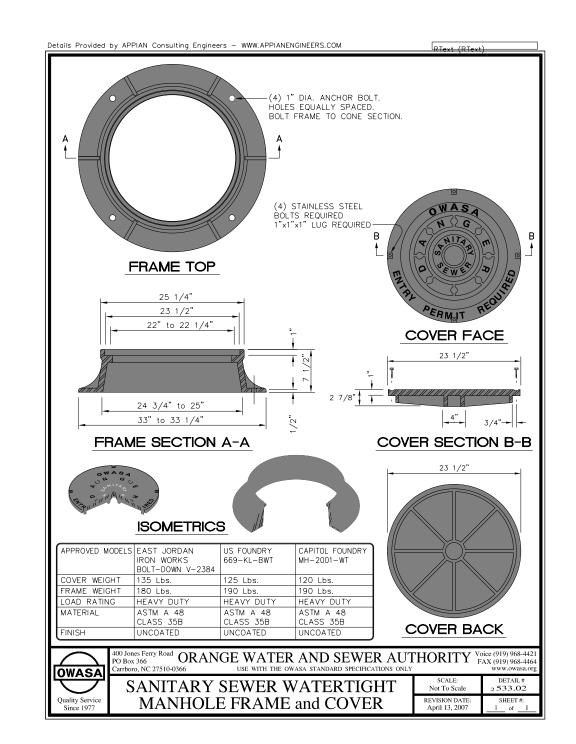


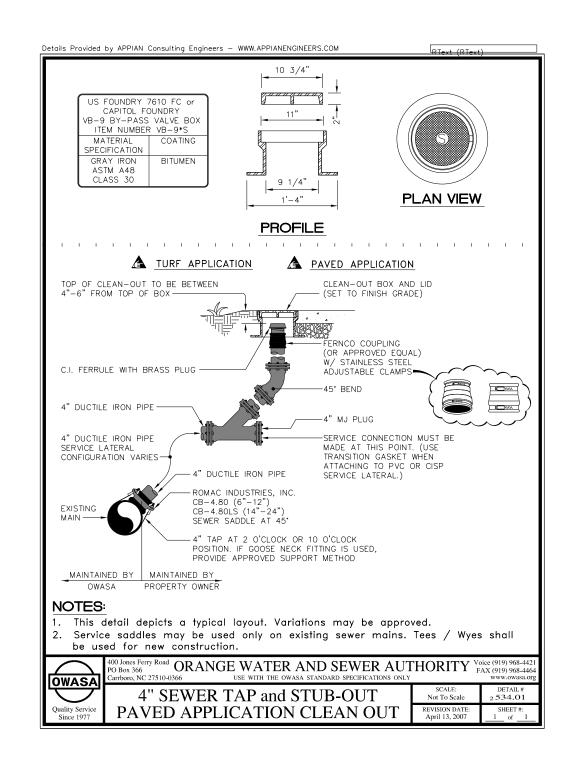
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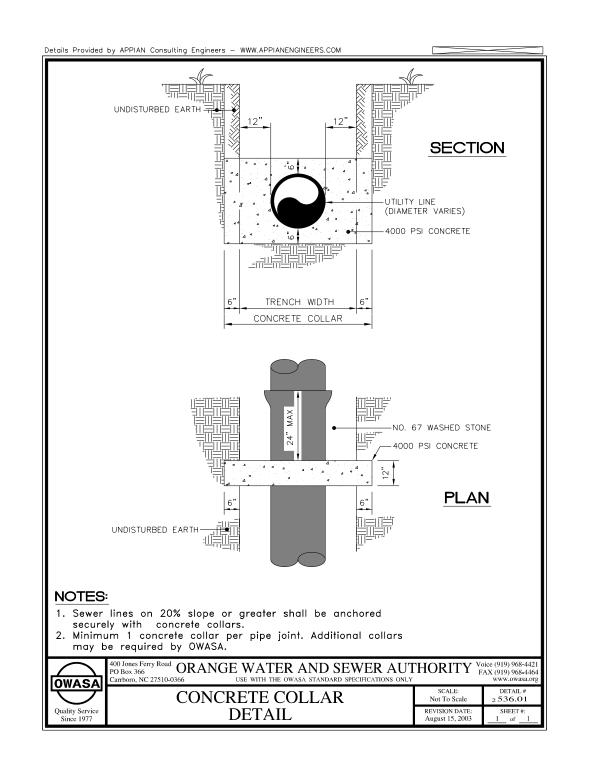


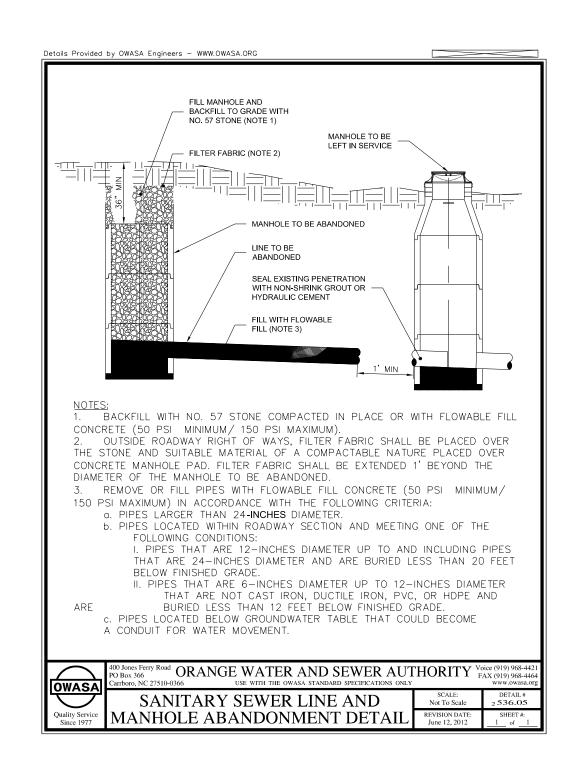
#### UTILITY CONSTRUCTION

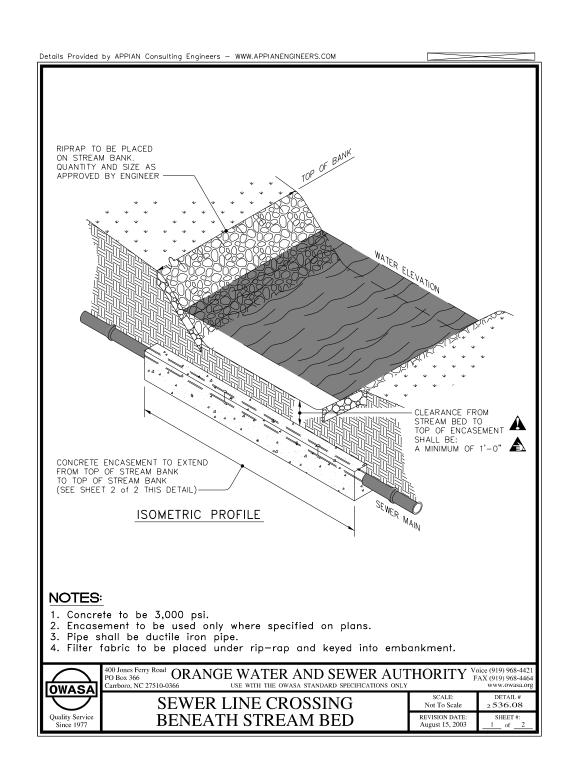


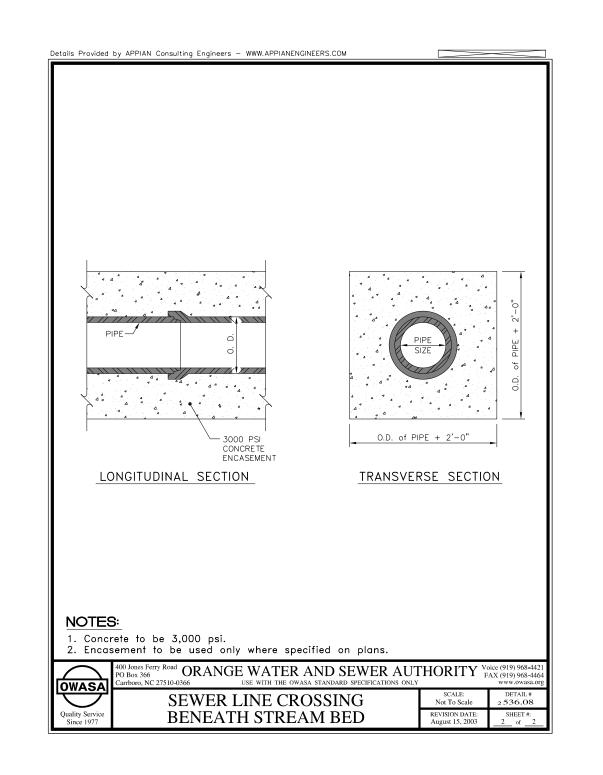




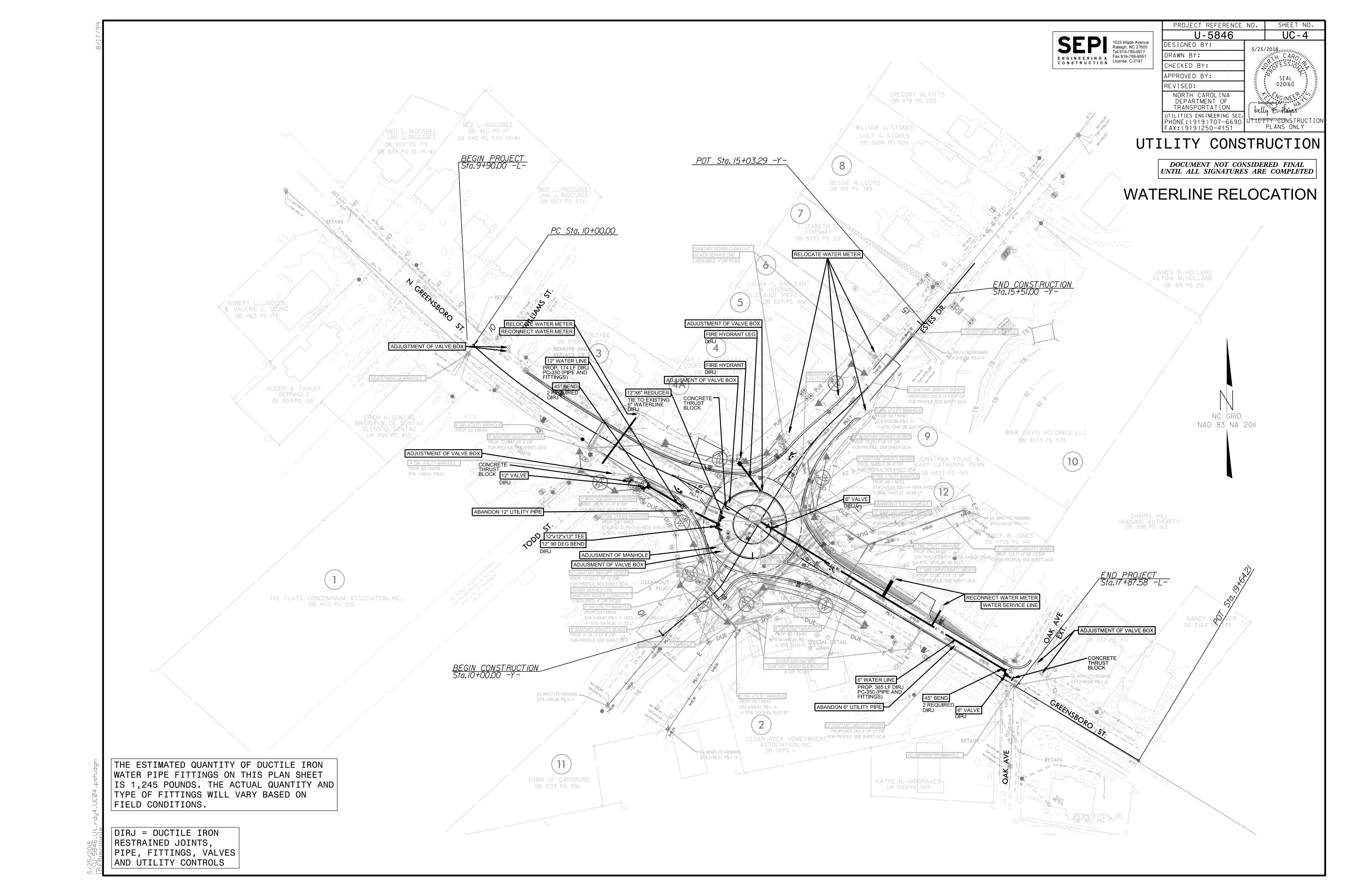


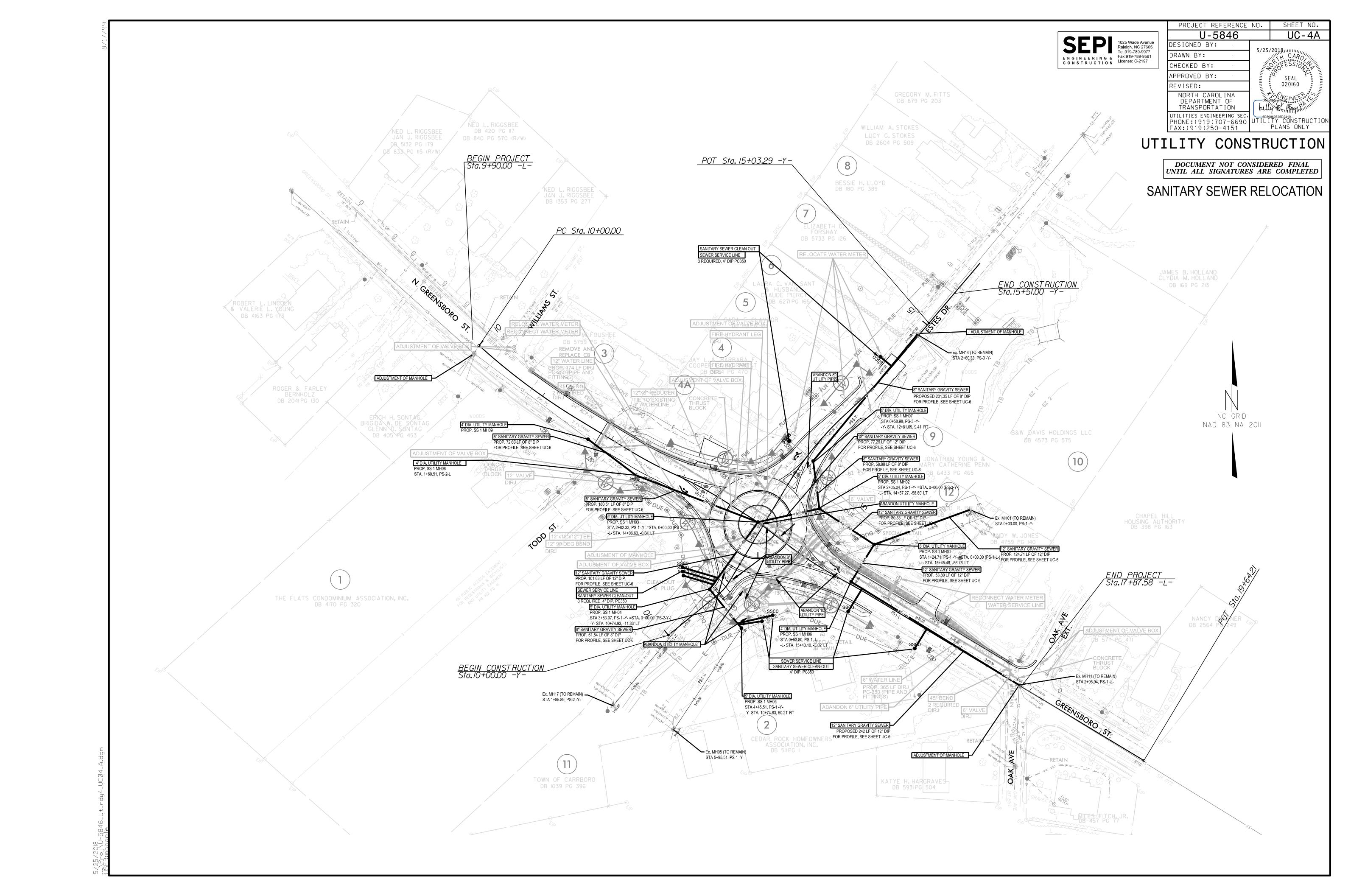


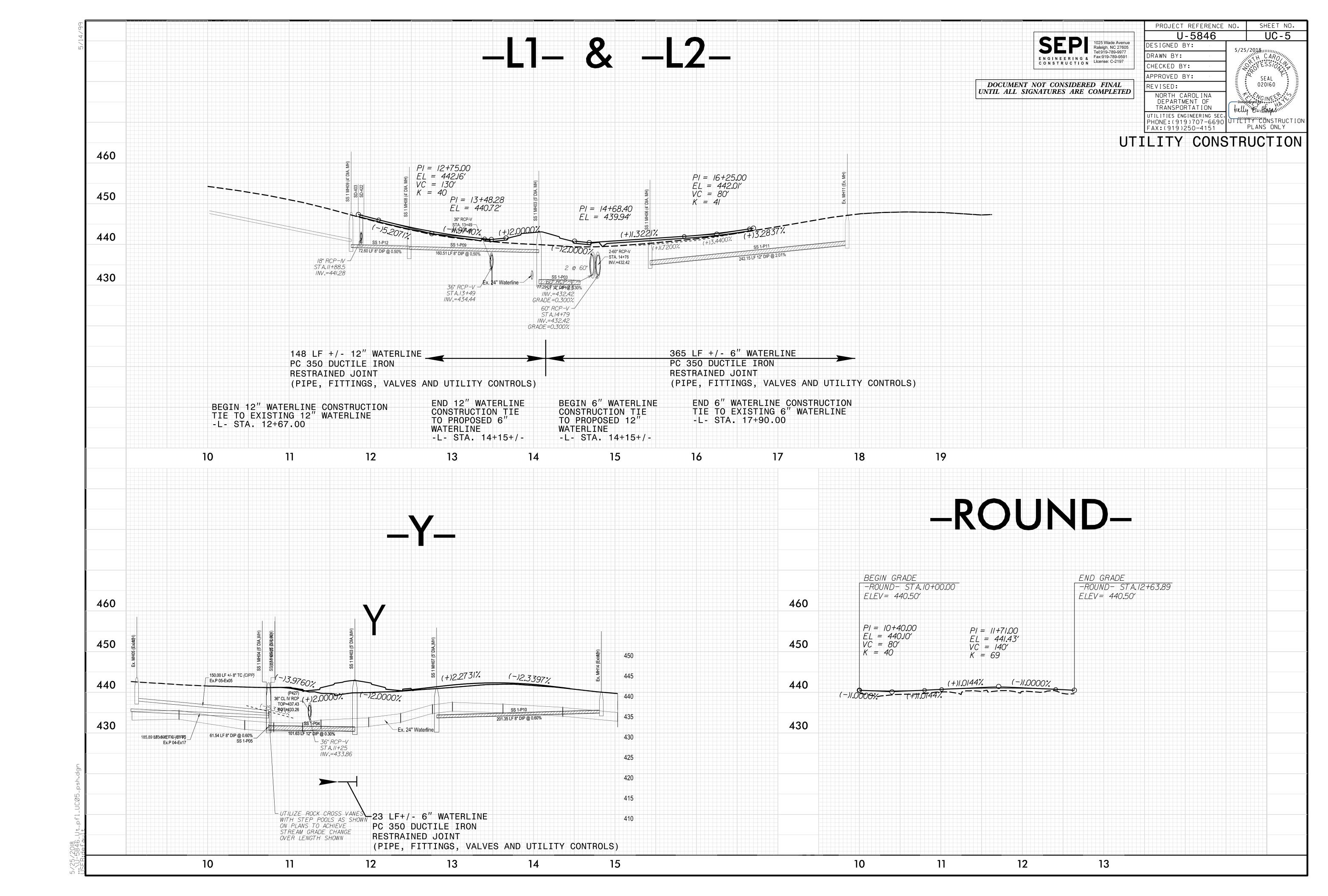


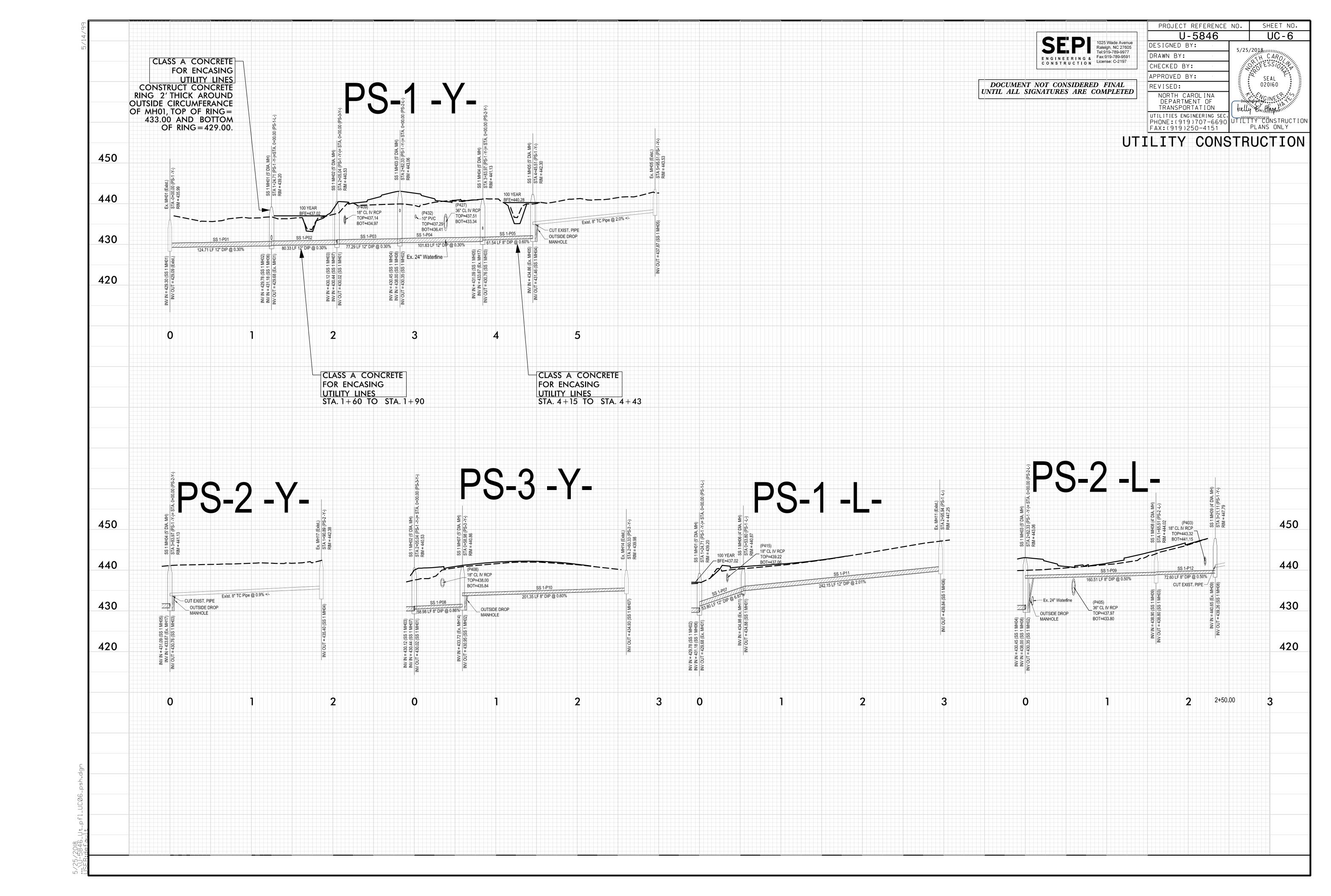


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PROJECT AREA-Greensboro Carrbord S pop. 19,178 VICINITY MAP

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

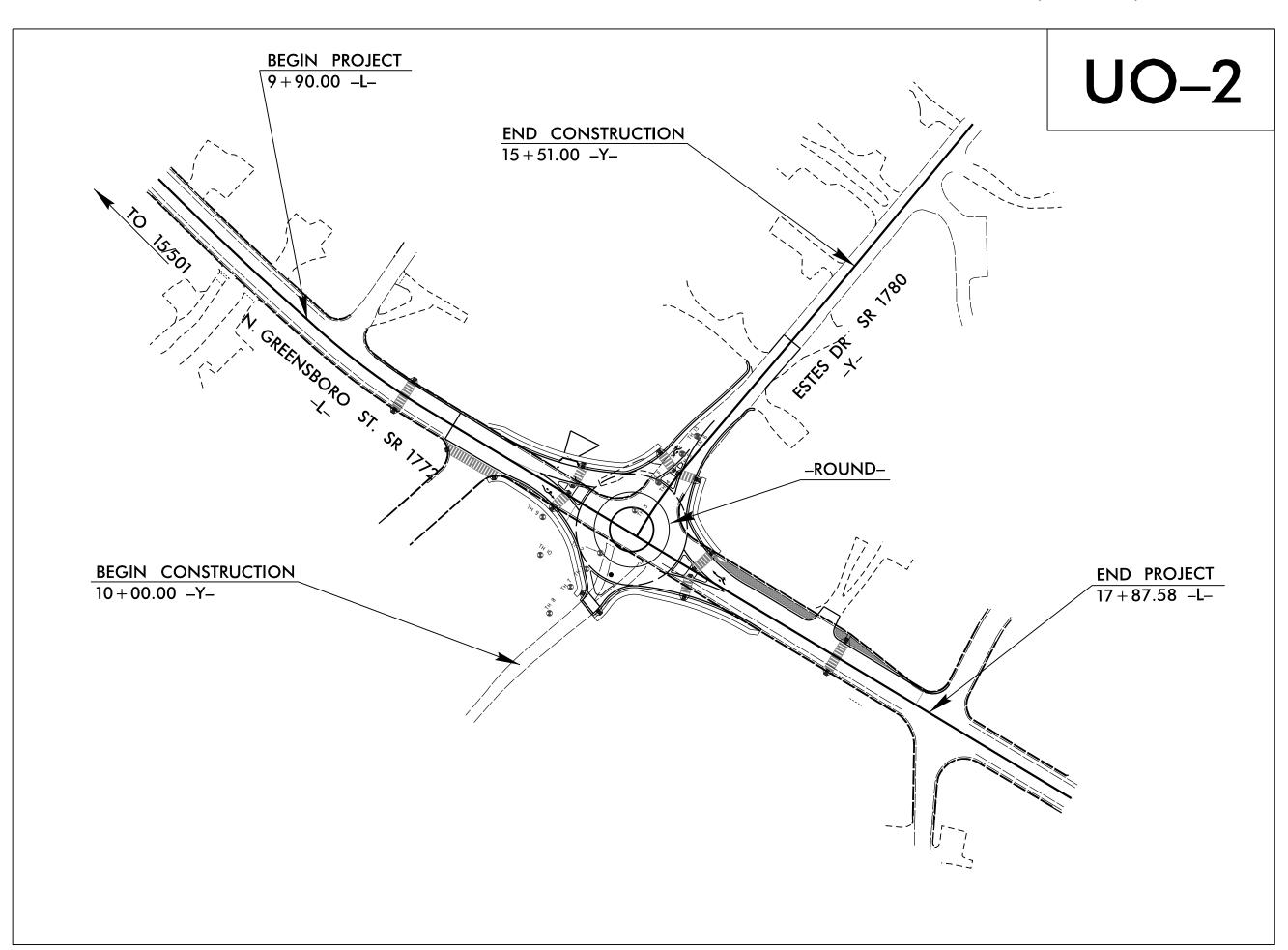
# UTILITY BY OTHERS PLANS ORANGE COUNTY

T.I.P. NO. SHEET NO U-5846 UO-1

PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS

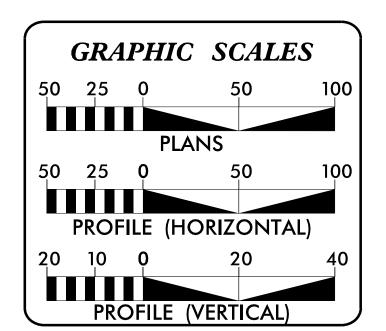
LOCATION: SR 1772 (GREENSBORO STREET) AT SR 1780 (ESTES DRIVE) IN CARRBORO, CONSTRUCT ROUNDABOUT.

TYPE OF WORK: ELECTRIC POWER DISTRIBUTION, GAS, TELEPHONE, CABLE TV









#### INDEX OF SHEETS

**DESCRIPTION** TITLE SHEET

SHEET NO.

*UO-1* 

**UO**–2

UTILITY BY OTHERS SHEET

#### UTILITY OWNERS ON PROJECT

(1) DUKE ENERGY – POWER (DISTRIBUTION)

(2) PSNC - GAS (DISTRIBUTION)

(3) AT&T - (COMMUNICATIONS)

(4) CHARTER COMMUNICATIONS – (COMMUNICATIONS)

(5) TOWN OF CHAPEL HILL - (COMMUNICATIONS)

ENGINEERING & CONSTRUCTION

1025 Wade Avenue

Don Langley

DIVISION 7 UTILITY COORDINATOR Kelly Hayes, PE, PLS UTILITIES COORDINATION CONSULTANT

